

*Sub A1*  
What is claimed is:

1. A radio transmission apparatus comprising:  
an antenna comprised of first and second linear polarization antenna elements perpendicular to each  
5 other;  
modulating means for modulating transmission data to output a modulated signal; and  
phase controlling means for providing a 180 degrees phase difference to the modulated signal corresponding  
10 to the transmission data to output.
2. The radio transmission apparatus according to claim 1, wherein the first and second linear polarization antenna elements are located with longitudinal directions thereof crossing.
- 15 3. The radio transmission apparatus according to claim 1, wherein the first and second linear polarization antenna elements are located at a spaced interval on a plane with a longitudinal relationship between the elements indicative of twisted positions.
- 20 4. The radio transmission apparatus according to claim 1, wherein the first and second linear polarization antenna elements are located at a spaced interval with a longitudinal relationship between the elements indicative of having an angle.
- 25 5. The radio transmission apparatus according to claim 1, wherein the phase controlling means is multiplying means for multiplying a transmission signal

by a reference signal to multiply a reference signal that inverts a polarity of the transmission signal corresponding to the reference signal.

6. A radio transmission apparatus comprising:  
5 an antenna comprised of first and second linear polarization antenna elements perpendicular to each other;  
modulating means for modulating transmission data to output a modulated signal;

10 spreading means for spreading the modulated signal to output a spread signal; and  
phase controlling means for providing a 180 degrees phase difference to the spread signal corresponding to a spreading code to output.

15 7. The radio transmission apparatus according to claim 6, wherein the first and second linear polarization antenna elements are located with longitudinal directions thereof crossing.

8. The radio transmission apparatus according to 20 claim 6, wherein the first and second linear polarization antenna elements are located at a spaced interval on a plane with a longitudinal relationship between the elements indicative of twisted positions.

9. The radio transmission apparatus according to 25 claim 6, wherein the first and second linear polarization antenna elements are located at a spaced interval with a longitudinal relationship between the elements

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indicative of having an angle.

10. The radio transmission apparatus according to claim 6, wherein the phase controlling means is multiplying means for multiplying a transmission signal by a reference signal to multiply a reference signal that inverts a polarity of the transmission signal corresponding to the reference signal.

11. A radio transmission apparatus comprising:  
an antenna comprised of first antenna element and  
10 second antenna element that provide different planes of polarization;

modulating means for modulating transmission data to output a modulated signal; and  
a switch that switches the first antenna element and the second antenna element to input the modulated signal thereto corresponding to the transmission data.

12. A radio transmission apparatus comprising:  
an antenna comprised of first antenna element and  
second antenna element that provide different planes of  
20 polarization;

modulating means for modulating transmission data to output a modulated signal;

spreading means for spreading the modulated signal to output a spread signal; and

25 a switch that switches the first antenna element and the second antenna element to input the spread signal thereto corresponding to a spreading code.

13. A radio transmission apparatus comprising:  
an antenna that enables two kinds of polarizations  
perpendicular to each other to be transmitted and further  
enables the polarizations to be switched corresponding  
5 to transmission data; and

modulating means for modulating the transmission  
data to output a modulated signal.

14. A radio transmission apparatus comprising:  
an antenna that enables two kinds of polarizations  
10 perpendicular to each other to be transmitted and further  
enables the polarizations to be switched corresponding  
to a spreading code;

modulating means for modulating the transmission  
data to output a modulated signal; and  
15 spreading means for spreading the modulated signal  
to output a spread signal.

*Sub A17*  
15. A radio reception apparatus comprising:  
receiving means for receiving a signal transmitted  
with a different plane of polarization;  
20 electric field strength detecting means for  
detecting an electric field strength of the signal; and  
determining means for making a data determination  
based on a detected result on the electric field strength.

*Cont.*  
16. The radio reception apparatus according to  
25 claim 15, wherein the determining means makes a  
determination on data itself at the time of strong  
electric field strength, while with respect to data at

the time of weak electric field strength, inverting the data at the time of strong electric field strength to make a determination.

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*Cont.*

17. The radio reception apparatus according to  
5 claim 15, wherein the determining means comprises a  
D-flip flop receiving as its input data to be corrected  
and as its gate input a delayed judged result, and an  
X-NOR gate receiving as its inputs an output of the D-flip  
flop and the judged result.